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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,750	05/10/2006	Riyuuhei Tamamoto	062467	4476

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EXAMINER

LEUNG, KA CHUN A

ART UNIT	PAPER NUMBER
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3747

MAIL DATE	DELIVERY MODE
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09/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/578,750

Applicant(s)

TAMAMOTO ET AL.

Examiner

Ka Chun Leung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/11/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/10/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to Applicant's amendments filed on 07/11/2007.

Specification

2. The amendments to the Specification have been accepted.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.
4. Claims 1-4 remain rejected under 35 U.S.C. 103(a) as being unpatentable over FIORENZA (US 5,383,433) as cited in the prior Office Action.

Response to Remarks/Arguments

5. Applicant's arguments filed 07/11/2007 have been fully considered but they are not persuasive.
6. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "a first ignition instruction is generated after a predetermined time is elapsed from when a rotation position reference signal is first inputted to the microcomputer after the microcomputer is started up", see Remarks, Page 6, Paragraph 1) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

7. In particular the Applicant has noted that Claim 1 includes the following features:

...the engine starting apparatus further comprises an initial igniting function for generating ignition instructions when a preset time has been elapsed after a reference signal of an engine rotation position is first input to the microcomputer after the microcomputer has been started up by the electricity outputted from the power generator operated by the humanly operative starting device.

Broadly interpreted, the microcomputer is only required to generate ignition instructions after a preset time has been elapsed, after an engine rotation position is inputted, and after it has been started up by power generator. The claim limitations do not require the microcomputer to provide "the first ignition instructions" (emphasis added). That is to say, there is no requirement that the microcomputer provide the absolute first set of ignition instructions and does not preclude another ignition device from providing initial ignition instructions.

Additionally, the claims do not provide the limitation that the ignition instruction be generated after a predetermined time is elapsed "from when a rotation position reference signal is first inputted to the microprocessor after the microcomputer is started up." Contrary to this, the claim only recites that the ignition instruction be generated "when a preset time has elapsed after a reference signal of an engine rotation position is first input to the microprocessor..." (emphasis added). Therefore, the "preset time" can be considered as any duration of time after the microcomputer has been powered up and receives rotational information input.

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8. As cited in the prior Office Action (Paragraph 10 on Page 4), the microprocessor includes a "means for storing a plurality of desired ignition advance values that are functionally related to the magnitude of the elapsed time" and determines an elapsed time between two ignition events and compares the time with a predetermined time relating to a predetermined cut-off speed. Moreover, as noted by FIORENZA in Column 4, Lines 36-56:

"When the elapsed time between the two ignition events is less than the predetermined time, microprocessor 30 outputs a signal on line 40 to gate on SCR 42, thereby limiting the switch control signals output by trigger coil 12 to 0.9 volts. The limiting of these signals to 0.9 volts shuts off the inductive ignition circuit, but still allows transistor 36 to be turned on and off, thus giving speed indication to processor 30.

Microprocessor 30 then outputs a signal on line 44 which gates on Darlington transistor pair 46. When Darlington transistor 46 is switched on, power from power source 52 is applied via line 54 to primary winding 20. After a preset dwell time, microprocessor 30 ceases the output of the control signal on line 44, thereby shutting off Darlington pair 46. Power from power source 52 is then terminated, causing primary winding 20 to be turned off. The turning off of primary winding 20 causes its magnetic flux field to collapse, resulting in a large voltage spike being generated by secondary coil 22 across spark plug 24" (emphasis added).

Thus, the recited "preset time" of the present invention can be interpreted as the elapsed time between two ignition events that is less than a predetermined time. The microprocessor generates "ignition instructions" by outputting a signal that ultimately causes a voltage spike across the spark plug.

9. Regarding the limitation of providing a rotation position input to the microcomputer, FIORENZA notes in Column 4, Lines 11-30 that when the magnet (10) passes the trigger coil (12), which is also used to turn on switch (36). When the switch (36) is turned off, a signal is sent to processor pin (10) of the microprocessor to

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announce that ignition firing has occurred. Since the magnet (10) is used to produce a spark near TDC (top dead center) after the compression stroke, the position of the crank would inherently be known.

10. Regarding the limitation of starting up the microcomputer with electricity from a power generator, the microprocessor would necessarily be powered up prior to providing the "ignition instructions" as discussed above. The power generation means being previously discussed in the prior Office Action in Paragraph 11-12 on Page 5.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ka Chun Leung whose telephone number is (571) 272-9963. The examiner can normally be reached on 7:30AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Cronin can be reached on (571) 272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KCL
Ka Chun Leung
Examiner
Art Unit 3747


STEPHEN K. CRONIN
SUPERVISORY PATENT EXAMINER